

ALESIS MicroVerb 4

Reference Manual

Introduction

Thank you for purchasing the Alesis MicroVerb 4 Multieffects Processor. To take full advantage of the MicroVerb 4's functions, and to enjoy long and trouble-free use, please read this user's manual carefully.

How To Use This Manual

This manual is divided into the following sections describing the various modes of the MicroVerb 4. Though we recommend you take time to read through the entire manual once carefully, those having general knowledge about effects devices should use the table of contents to reference specific functions.

Chapter 1: Your First Session with the MicroVerb 4. A basic introduction to getting the unit up and running, auditioning the factory Programs, adjusting levels, comparing and storing edited Programs.

Chapter 2: Connections. Deals with the necessary preparation before using, including connections to other components such as instruments, mixing consoles, patchbays, and multitrack recorders.

Chapter 3: Overview of Effects. A detailed look at the signal processing capabilities of the MicroVerb 4 and the concept of multieffect programming.

Chapter 4: Description of Controls. A summary of all buttons, connectors, and parameters. Use this chapter as a quick reference guide when searching for specific information.

Chapter 5: MIDI Applications. This chapter discusses the various MIDI functions, such as recalling Programs, realtime modulation of parameters, and SysEx data transfer.

Chapter 6: Troubleshooting. Contains the Troubleshooting Index, maintenance and service information, and MIDI implementation chart.

Appendices. MIDI basics, trouble-shooting, maintenance and service information, MIDI Implementation Chart and an Index.

Conventions

The buttons, knobs, and rear panel connectors are referred to in this manual just as their names appear on the MicroVerb 4, using all capital letters and in brackets (*Example:* [STORE] button, [VALUE] Knob, etc.). When text in the MicroVerb 4's display is quoted, it is indicated using special typeface (*Example:* 00 to127, etc.).



When something important appears in the manual, an icon (like the one on the left) will appear in the left margin. This symbol indicates that this information is vital when operating the MicroVerb 4.

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CHAPTER 1

YOUR FIRST SESSION WITH THE MICROVERB 4

Unpacking and Inspection

Your MicroVerb 4 was packed carefully at the factory, and the shipping carton was designed to protect the unit during shipping. Please retain this container in the highly unlikely event that you need to return the MicroVerb 4 for servicing.

The shipping carton should contain the following items:

- This instruction manual
- Alesis MicroVerb 4 with the same serial number as shown on shipping carton
- AC Power Supply Adapter
- Alesis warranty card

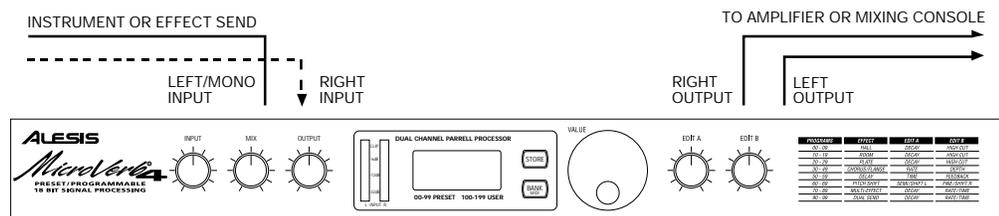


It is important to register your purchase; if you have not already filled out your warranty card and mailed it back to Alesis, please take the time to do so now.

Basic Connections

The MicroVerb 4 is designed to accommodate a number of applications, whether you are connecting an instrument directly into it, or connecting it with a mixing console. Briefly described here are the basic connections to get you up and running quickly. For more information on connections, please refer to Chapter 2.

- **Mono In, Mono or Stereo Out.** Connect a mono cord to the [LEFT/MONO] INPUT of the MicroVerb 4 from a mono source. (The Left input will then feed both inputs.) Connect another mono cord from the [LEFT] OUTPUT of the MicroVerb 4 to an amplification system or mixer input. Additionally, you could connect a second mono cord to the [RIGHT] OUTPUT for use with a stereo amplification system, or two mixer inputs.
- **Stereo.** Connect two mono cords to the [LEFT/MONO] & [RIGHT] INPUTS of the MicroVerb 4 from a stereo source, and two mono cords from the [LEFT/MONO] & [RIGHT] OUTPUTS of the MicroVerb 4 to a stereo amplification system or two mixer inputs.



If connecting to a mixing console's aux sends/returns, you will want to adjust the output [MIX] so that the MicroVerb 4 outputs only wet (effected) signal.

Powering Up

After making your connections, turn on the system's power using this procedure:

- ζ Before turning on the MicroVerb 4's power, check the following items:
 - Have all connections been made correctly?
 - Are the volume controls of the amplifier or mixer turned down?
- j Plug in the power adapter and insert the Power jack into the [POWER] input on the rear panel of the MicroVerb 4.

Upon power-up, the display will briefly illuminate all front panel LEDs, display the Software version, and then display the last selected Program Number (00–199).

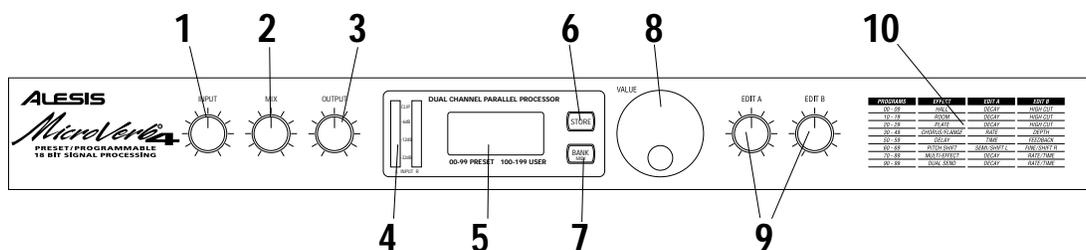
- ↪ Turn on the power of the amplifier/mixer, and adjust the volume.

Setting Levels

Proper setting of the input and output levels is crucial in order to achieve the maximum signal-to-noise ratio. As a good rule of thumb, it is always best to set both input and output level controls at 3/4 or 75% of full. This will decrease the possibility of overload distortion and keep the amount of background noise to a minimum.

If the Input Meters on the MicroVerb 4 begin to clip (go into the red), turn down the Input level or decrease the volume of the source (instrument, mixer send, etc.). If the MicroVerb 4's level is causing the mixer or amp to distort, turn the Output Level down.

What's on the Front Panel?



The MicroVerb 4's Front Panel contains the following:

- “ Input. The Input level control sets the level going into the MicroVerb 4. This should be adjusted so that the input meters (÷) read approximately -6dBu (3 of the 4 LEDs lit up). It controls both the Left and Right Input levels simultaneously.
- j Mix. The Mix control adjusts the balance between the direct signal coming into the input and the effects generated by the MicroVerb 4.
- ↪ Output. The Output level control sets the level going to the amplifier or mixer from the MicroVerb 4.
- ÷ Level Meters. The Level meters display the signal level coming into the Input. There are actually 2 meters, one for the left and right inputs, but both will light up for a mono input.
- f LED Display. The LED display typically shows the currently selected Program. It can also display the MicroVerb 4's MIDI channel (when the MIDI button is held down) or parameter values (when the [EDIT A] or [EDIT B] knobs are adjusted).

The display will dim slightly when it is not displaying the current Program. When the Store button is pressed, the Display will flash the destination Program number.

- ± **STORE Button.** When the [STORE] button is pressed, the LED Display will flash the number of the Program that the current program will be stored to. If Store is pressed again, the display will flash rapidly and the current Program will be stored. Programs can only be stored into the User bank, Programs 100-199.
- £ **BANK/MIDI Button.** If this button is clicked once, a Program in the opposite bank will be selected. (i.e. If Preset Program 34 is selected when Bank is pressed, the MicroVerb 4 will switch to User Program134.)

If the [BANK/ MIDI] button is held for more than one second, the MIDI channel number will be displayed. You can change the MIDI channel by turning the Value encoder while holding this button.

Value Encoder. The [VALUE] Encoder is used to select Programs and to change the MIDI channel (see above).

- ¥ **Edit A/ Edit B Controls.** Each Program on the MicroVerb 4 has two parameters which can be adjusted. Depending on the type of Program selected, these might alter Reverb Decay, Chorus Depth, etc. When an Edit knob is adjusted, the new value is briefly shown on the LED Display.
- m **Parameter Chart.** This Chart shows you what effect type is assigned to various groups of Programs. Also, it shows the function of the [EDIT A] and [EDIT B] controls.

Auditioning Internal Programs

The MicroVerb 4 comes with 100 Programs in a Preset bank, plus another 100 Programs in the User bank. These Programs represent the wide range of applications for which the MicroVerb 4 is suited. The difference between Preset and User Programs is that User Programs can be replaced with your own edits, but Preset Programs are permanently stored into memory.

To audition the internal effect Programs, turn the [VALUE] knob to scroll through the 100 Preset and 100 User Programs.

Switching Between Preset and User Banks

To instantly switch between the Preset and User banks, press the [BANK] button. Each time you press the [BANK] button, the MicroVerb 4 will toggle back and forth between the Preset and User banks. The display will indicate this by showing a program in the 00-99 (Preset) range or the 100-199 (User) range.

You can also switch between banks when scrolling through the Programs with the [VALUE] knob. When you scroll clockwise past Preset 99, the display will “roll-over” to User 100. Likewise, if you turn back the [VALUE] knob counterclockwise past User 100, the display will move to Preset 99. However, if you turn back the [VALUE] knob counterclockwise past Preset 00, the display will not wrap around back to User 199 but instead will remain at Preset 00.

Adjusting Effects Mix Levels

Whether a Program contains a single effect or two or three effects, you can adjust the MicroVerb 4's [MIX] control to obtain a desirable balance between the original, unaffected signal and each effect's output. The [MIX] Knob controls the balance between the input signal and the effects generated by the MicroVerb 4.

When hooked up to an instrument setup, such as a guitar amp, the Mix setting will typically be somewhere in the middle, balancing the effects with the sound of the source instrument. If the MicroVerb 4 is connected to a mixing console's Aux Send, the Mix control should be set all the way to the right (effects only) so that the balance can be controlled from the board.

Storing Edited Programs

Once you are satisfied with the changes you have made to an edited Program, or are creating a new Program from scratch, you will need to store your edited Program back into memory. The MicroVerb 4 will temporarily store the currently selected Program in non-volatile memory. If you edit a Program, the changes you made will be lost the next time you power on the unit if you haven't stored the edited Program into memory. If you select another Program from memory **before** storing the edited Program, your changes will also be lost.



Although the MicroVerb 4 has two banks (Preset and User), you can only store Programs in the User bank.

To store an edited Program:

i Press [STORE].

The Destination Program Number will flash. If the edited Program is from the Preset bank (Programs 00-99), the MicroVerb 4 will show the complement Program in the User Bank (by adding 100 to the Program number.) Programs can only be stored to the location provided, i.e. there is no way to store an edited version of Program 112 over Program 113.

j Press [STORE] again.

The LED Display will momentarily flash quickly, indicating that the Program has been stored.



Any changes you make to a Program are temporary, until you store those changes into memory. If the Program you are editing is in the Preset bank, you must save the changes you've made to a location in the User bank. If you recall another Program before storing, your changes will be lost.

Bypassing Effects

At any time you can bypass the effects, thereby allowing the direct signal to pass through the MicroVerb 4 unchanged. This can be done in two ways:

- by turning the MIX knob all the way to the left,
- by connecting a footswitch to the [FOOTSWITCH] jack and pressing the footswitch.

Each time the footswitch connected to the [FOOTSWITCH] jack is pressed, Bypass mode is toggled on and off again. For more information about Footswitches, see Chapter 2.

CHAPTER 2

CONNECTIONS

AC Power Hookup

The MicroVerb 4 comes with a power adapter suitable for the voltage of the country it is shipped to (either 110 or 220V, 50 or 60 Hz).

With the MicroVerb 4 off, plug the small end of the power adapter cord into MicroVerb 4's [POWER] socket and the male (plug) end into a source of AC power. It's good practice to not plug in the MicroVerb 4 until all other cables are hooked up.



Alesis cannot be responsible for problems caused by using the MicroVerb 4 or any associated equipment with improper AC wiring.

Line Conditioners and Protectors

Although the MicroVerb 4 is designed to tolerate typical voltage variations, in today's world the voltage coming from the AC line may contain spikes or transients that can possibly stress your gear and, over time, cause a failure. There are three main ways to protect against this, listed in ascending order of cost and complexity:

- Line spike/surge protectors. Relatively inexpensive, these are designed to protect against strong surges and spikes, acting somewhat like fuses in that they need to be replaced if they've been hit by an extremely strong spike.
- Line filters. These generally combine spike/surge protection with filters that remove some line noise (dimmer hash, transients from other appliances, etc.).
- Uninterruptible power supply (UPS). This is the most sophisticated option. A UPS provides power even if the AC power line fails completely. Intended for computer applications, a UPS allows you to complete an orderly shutdown of a computer system in the event of a power outage, and the isolation it provides from the power line minimizes all forms of interference—spikes, noise, etc.

Audio Connections

The connections between the MicroVerb 4 and your studio are your music's lifeline, so use only high quality cables. These should be low-capacitance shielded cables with a stranded (not solid) internal conductor and a low-resistance shield. Although quality cables cost more, they do make a difference. Route cables to the MicroVerb 4 correctly by observing the following precautions:

- Do not bundle audio cables with AC power cords.
- Avoid running audio cables near sources of electromagnetic interference such as transformers, monitors, computers, etc.
- Never unplug a cable by pulling on the wire itself. Always unplug by firmly grasping the body of the plug and pulling directly outward.
- Do not place cables where they can be stepped on. Stepping on a cable may not cause immediate damage, but it can compress the insulation between the center conductor and shield (degrading performance), or reduce the cable's reliability.
- Avoid twisting the cable or having it make sharp, right angle turns.

- Although Alesis does not endorse any specific product, chemicals such as Tweek and Cramolin, when applied to electrical connectors, are claimed to improve the electrical contact between connectors.

Typical Applications

The analog audio inputs and outputs are typically used in one of three ways:

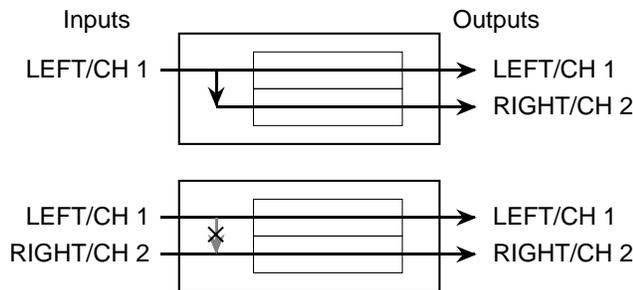
- from one or two effect/aux send outputs of a mixer, and out to the effect return inputs of the mixer; or,
- from a line-level instrument (like a guitar or keyboard with either a mono or stereo output), and out to an amplifier or mixer input; or,
- from the stereo buss outputs of a mixer to a mix-down tape machine or amplifier.

When used with a mono source, the MicroVerb 4 is placed between the source and the mixer/amplifier. Although the source may be mono, both the [LEFT/MONO] and [RIGHT] outputs can be connected to the inputs of a mixer/amplifier if stereo processing effects are desired. If using the effect sends of a mixer, you have the advantage of sending any of the mixer's input channels to the MicroVerb 4's input(s), and have control over the level of each channel being sent.

These applications are outlined and illustrated in detail on the following pages.

Input Jack Wiring

The MicroVerb 4's [LEFT] INPUT jack is normalled to the [RIGHT] INPUT. This means that if you only connect a single mono cable to the [LEFT] INPUT jack, it will also be routed to the [RIGHT] INPUT. However, if anything is connected to the [RIGHT] INPUT jack, this normalized connection will be broken; therefore the [LEFT] INPUT jack feeds only the [LEFT] INPUT, and the [RIGHT] INPUT jack feeds only the [RIGHT] INPUT. Also, the [RIGHT] INPUT jack is **NOT** normalled to the [LEFT] INPUT.

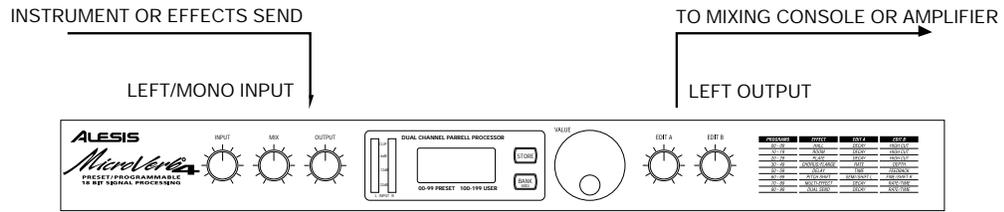


Interfacing Directly with Instruments

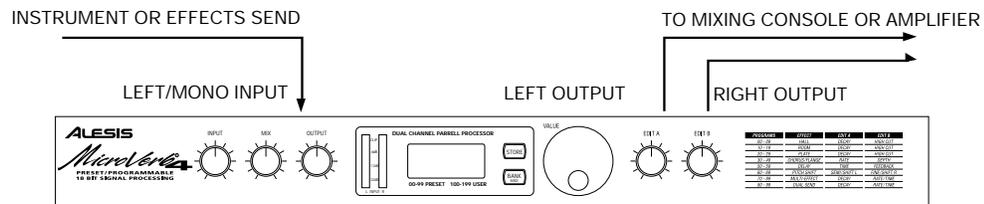
J *When connecting audio cables and/or turning power on and off, make sure that all devices in your system are turned off and the volume controls are turned down.*

The MicroVerb 4 has two 1/4" unbalanced inputs and two 1/4" unbalanced outputs. These provide three different audio hookup options:

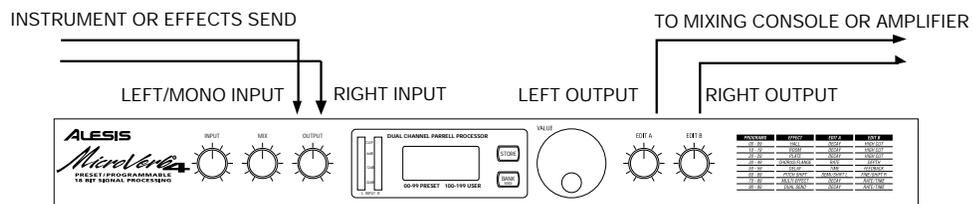
- **Mono.** Connect a mono cord to the [LEFT] INPUT of the MicroVerb 4 from a mono source, and another mono cord from the [LEFT] output of the MicroVerb 4 to an amplification system or mixer input.



- **Mono In, Stereo Out.** While still using a mono input, you could connect two mono cords to the [LEFT] and [RIGHT] outputs of the MicroVerb 4 to a stereo amplification system or two mixer inputs.



- **Dual Mono.** Connect two mono cords to the [LEFT] and [RIGHT] inputs of the MicroVerb 4 from two mono sources, and two other mono cords from the [LEFT] and [RIGHT] outputs of the MicroVerb 4 to a stereo amplification system or two mixer inputs. This hookup allows discrete processing of the two channels, since some of the effects are discrete stereo to maintain stereo imaging.
- **Stereo.** Connect two mono cords to the [LEFT] and [RIGHT] INPUTS of the MicroVerb 4 from a stereo source, and two other mono cords from the [LEFT] and [RIGHT] OUTPUTS of the MicroVerb 4 to a stereo amplification system or two mixer inputs.



Interfacing to a Mixing Console

The MicroVerb 4 handles mono or stereo sends at all system levels. The input circuitry of the MicroVerb 4 can easily handle +4 dBu levels (+20 dBu peaks), while having enough input and output gain to interface with the low -10 dBV signal levels of budget recording systems.

The MicroVerb 4 may be connected to a mixing console in several different ways. It can be used to effect several instruments at once by using the auxiliary send and return controls of the mixer. Another method of interfacing is to connect the unit directly to the insert send and return patch points of the channel that is to be effected. Still another way of interfacing the MicroVerb 4 to a mixer or recording console would be in-line across the output of your mixing console. This last setup would be used only if you wanted effects on the entire mix.

Using Aux Sends

Generally, mixing consoles provide two types of auxiliary sends: pre-fader sends for creating a cue (headphone) mix, and individual, post-fader effect sends. Typically, if a mixer has more than two sends per channel (4, 6 or 8, perhaps), the first two sends are reserved for the cue sends, while the remaining sends are used to feed effects, such as the MicroVerb 4. If you are using a mixer with more than two sends, connect the MicroVerb 4 using post-fader sends.

Using a mixer's aux sends poses a distinct advantage: each channel has its own level control feeding the aux output (and eventually the MicroVerb 4 input). This allows you to make a mix of any channels you want to go to the effects by using the individual channels' aux send levels on the mixer. Most consoles also have aux master controls, which set the overall level of each aux output.

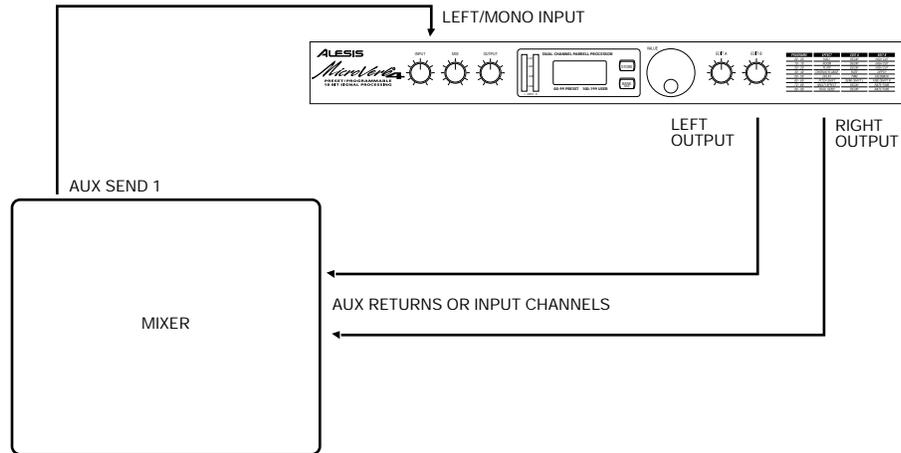
Coming back from the MicroVerb 4's outputs into the mixer, you have two options:

- connecting to dedicated return inputs, or
- connecting to channel inputs.

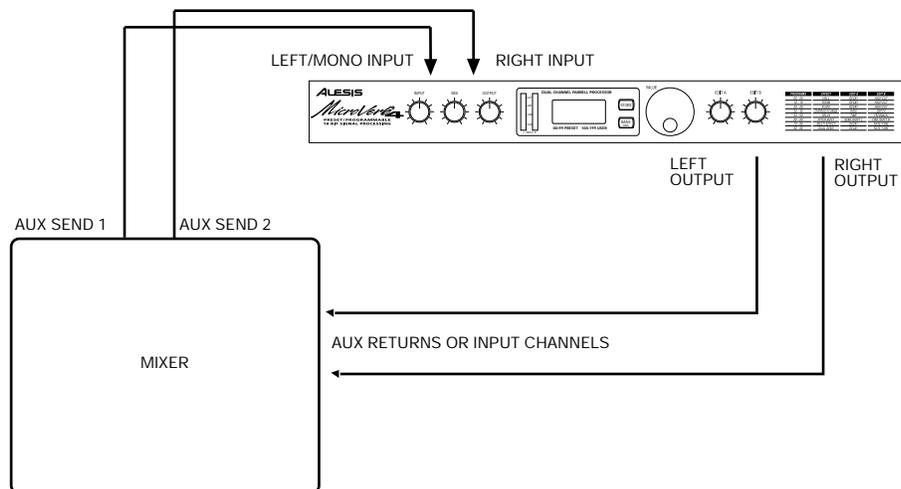
The former is good if your mixer provides dedicated inputs (called returns) for effect devices like the MicroVerb 4. If your mixer does not have these, or you have already used them all, consider connecting the MicroVerb 4 to channel inputs (if there are any remaining). This method gives you the added bonus of more panning options and EQ on the effects.

No matter where you connect the output of the MicroVerb 4 into the mixer, you are in control of the balance between the mixer's channel inputs (the uneffected signal being routed to the aux sends and the Mix), and the effect returns coming from the MicroVerb 4. The effect returns generally should only contain effected signal, and not have any uneffected signal mixed with it (since these two signals are blended together at the mixer). Therefore, it may be necessary to modify the mix so that only effected signal is present at the MicroVerb 4's outputs. To do this, turn the Mix control all the way to the right.

Mono In - Stereo Out. If you only want to feed the MicroVerb 4 a mono input, but wish to connect both of its outputs back to the mixer, you will need three 1/4" audio cables. Connect a mono cord from an effect send to the [LEFT] input of the MicroVerb 4, another mono cord from the [LEFT] output of the MicroVerb 4 to an effect return or other mixer input, and another mono cord from the [RIGHT] output of the MicroVerb 4 to an adjacent effect return or mixer input.



Stereo In - Stereo Out. This connection is similar to the one described above. However, by utilizing two sends from the mixer, we add one more cord and can now send a stereo signal to the MicroVerb 4's inputs. For example, if you connected sends 3 and 4 to the [LEFT] and [RIGHT] inputs, and had a stereo instrument (such as a keyboard) connected to two channel inputs of the mixer (either one panned hard left and hard right), you would send the left channel to send 3 and the right channel to send 4. This is especially useful on the Dual Send Programs, #90-99 and 190-199.

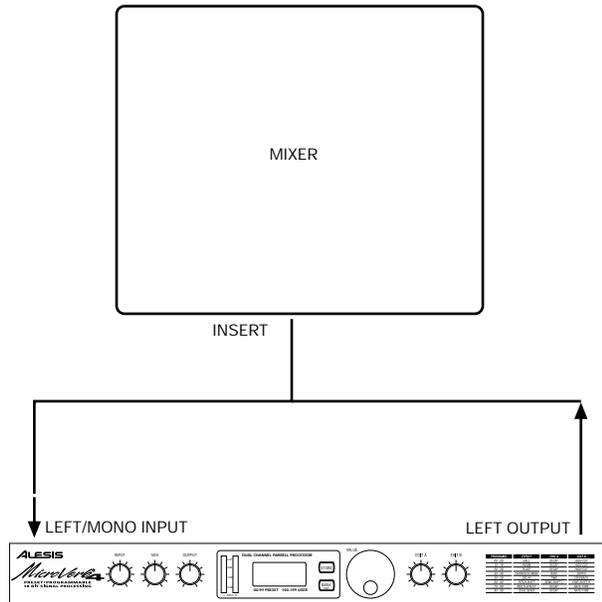


Using Inserts

By using individual channel inserts, you can dedicate the MicroVerb 4 to a specific channel (or pair of channels) on the mixer. The Insert connections on the back of the mixer provide a way of “inserting” external processing equipment into the signal path. The insert occurs after the input amplifier, and before the main fader; essentially it is the same as connecting the source (instrument or microphone) into the MicroVerb 4 before the mixer’s channel input. However, some mixing console’s inserts come after the EQ section, and may therefore be different from the original signal. If nothing is connected to the channel’s Insert jack, the signal is not routed there.

Usually, insert connections require a special, stereo-splitting Y-cord to be connected (one stereo plug provides both send and return while two mono plugs connect separately to the effects unit’s input and output). These are known as TRS connectors (tip-ring-sleeve). The tip of the stereo plug carries the send or output of the insert jack, while the ring carries back the return. The sleeve represents a common ground for both signals.

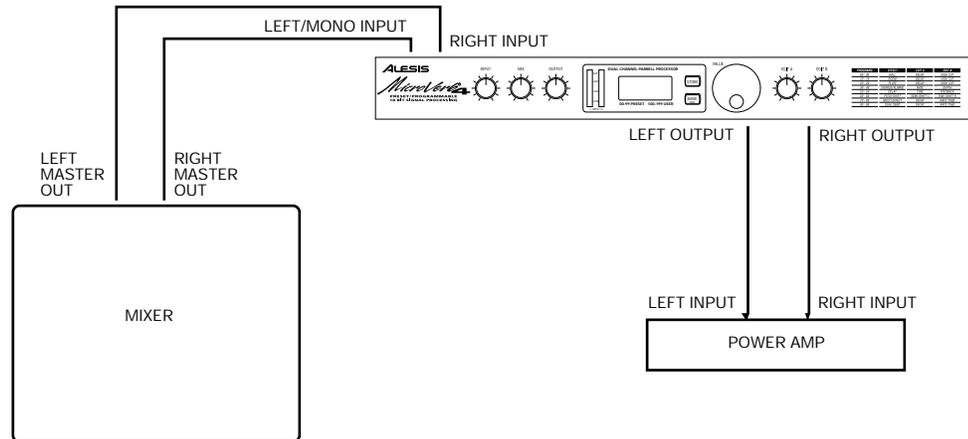
Mono. This involves connecting a 1/4" TRS (tip-ring-sleeve) Y-cable to the Insert jack of a single channel on a mixing console. The other end of the cable (which splits into two, 1/4" mono connectors) are connected to the [LEFT] input and [LEFT] output, respectively. If you do not hear any audio after making these connections, swap the input and output cables at the MicroVerb 4, as these may be wired backwards. If the cable is color-coded, usually the red jack represents the send (which connects to the MicroVerb 4’s input) and black is the return (which connects to the output).



Using Main Outputs

When you want to add effects to everything on the mixer, you can connect the MicroVerb 4 between the mixer’s outputs and the amplifier’s or tape machine’s

inputs. This is done by using two 1/4" mono cables to connect the Left and Right Main Outputs of the mixing console to the [LEFT/MONO] and [RIGHT] inputs of the MicroVerb 4. The [LEFT] and [RIGHT] outputs of the MicroVerb 4 are then connected to a stereo amplifier, or two input channels of another mixing console (for sub-mixing applications).



Avoiding Ground Loops

In today's studio, where it seems every piece of equipment has complex routing and computer logic, there are many opportunities for ground loop problems to occur. These show up as hums, buzzes or sometimes radio reception and can occur if a piece of equipment "sees" two or more different paths to ground. While there are methods to virtually eliminate ground loops and stray radio frequency interference, most of the professional methods are expensive and involve installing a separate power source just for the sound system. Here are some easy helpful hints that a professional studio installer might use to keep those stray hums and buzzes to a minimum.

- ↳ **KEEP ALL ELECTRONICS OF THE SOUND SYSTEM ON THE SAME AC ELECTRICAL CIRCUIT.** Most stray hums and buzzes happen as a result of different parts of the sound system being plugged into outlets of different AC circuits. If any noise generating devices such as air conditioners, refrigerators, neon lights, etc., are already plugged into one of these circuits, you then have a perfect condition for stray buzzes. Since most electronic devices of a sound system don't require a lot of current (except for power amplifiers), it's usually safe to run a multi-outlet box or two from a *SINGLE* wall outlet and plug in all of the components of your system there.
- ↳ **KEEP AUDIO WIRING AS FAR AWAY FROM AC WIRING AS POSSIBLE.** Many hums come from audio cabling being too near AC wiring. If a hum occurs, try moving the audio wiring around to see if the hum ceases or diminishes. If it's not possible to separate the audio and AC wiring in some instances, make sure that the audio wires don't run parallel to any AC wire (they should only cross at right angles, if possible).
- ↳ **TO ELIMINATE HUM IF THE ABOVE HAS FAILED:**
 - A) Disconnect the power from all outboard devices and tape machines except for the mixer and control room monitor power amp.
 - B) Plug in each tape machine and outboard effects device one at a time. If possible, flip the polarity of the plug of each device (turn it around in the socket) until the quietest position is found.
 - C) Make sure that all of the audio cables are in good working order. Cables with a detached ground wire will cause a very loud hum!!
 - D) Keep all cables as short as possible, especially in unbalanced circuits.

If the basic experiments don't uncover the source of the problem, consult your dealer or technician trained in proper studio grounding techniques. In some cases, a "star grounding" scheme must be used, with the mixer at the center of the star providing the shield ground on telescoping shields, which do NOT connect to the chassis ground of other equipment in the system.

MIDI

MIDI (Musical Instrument Digital Interface) is an internationally-accepted protocol that allows musical-related data to be conveyed from one device to another. The MIDI connections on the MicroVerb 4 provide four different functions:

- To recall Programs using MIDI program change messages
- To control (modulate) parameters inside the MicroVerb 4 in realtime via MIDI controllers (*example*: A keyboard's mod wheel, or pedals, etc.)
- To send and receive SysEx (System Exclusive) dumps of individual programs or the entire bank of programs for storage and retrieval purposes
- To pass-on MIDI information thru the MicroVerb 4 to another MIDI device.

To connect the MicroVerb 4's MIDI ports to another MIDI device:

- 2 Connect a MIDI cable from the MicroVerb 4's MIDI [IN] connector to the other MIDI device's MIDI OUT connector.
- 3 Connect another MIDI cable from the MicroVerb 4's MIDI [OUT/THRU] connector to the MIDI IN connector of the other MIDI device.

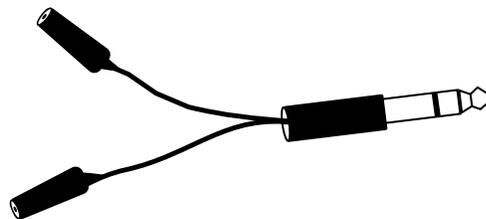
Note: It is not necessary to follow step 2 if you intend to only send information to the MicroVerb 4, and do not need to receive information back from it. *Example*: If you only want to be able to recall Programs using MIDI program change messages, there is no need to connect a cable to the MicroVerb 4's [OUT/THRU] connector. For more information about MIDI and Modulation, refer to chapter 5.

Footswitch

On the rear panel you will find a footswitch jack labeled [FOOTSWITCH]. This is a Stereo jack, with connections for both a normal Bypass jack and for two footswitch jacks. All footswitches must be plugged in before the MicroVerb 4 has its power turned on.

To hook up a single Bypass Footswitch: Any momentary footswitch can be plugged into the Footswitch input on the MicroVerb 4. The extra connector on the footswitch jack will simply be ignored.

To hook up two Footswitches: The MicroVerb 4 is equipped with a 1/4" TRS footswitch jack which can connect to two footswitch jacks. To connect both footswitches, first locate a cable or adapter which has one male 1/4" TRS jack and two female 1/4" mono jacks. This cable is available from several manufacturers, such as Radio Shack (#274-302) and Hosa (YPP-118).



The footswitch connected to the tip of this jack will function as a Bypass pedal. The footswitch connected to the center ring of this jack will function as a Control pedal. (See below.) You may also use a dual footswitch, which has two pedals on one

assembly with a stereo cord already attached. The pedals are often packaged with digital pianos.

You should *not* use the dual footswitch from a guitar amplifier, as these are typically latching type footswitches. You can tell a latching footswitch from an unlatched type when it takes two presses to enable any of the functions (Bypass, etc.). Also, these footswitches usually “click” when stepped on. Use only Momentary (non-latching) footswitches with the MicroVerb 4.

If desired, a mono footswitch can be plugged half way (to the first “click”) to function as a Control Footswitch only.

Bypass Footswitch . Pressing the footswitch will toggle Bypass mode on and off. When Bypass mode is activated, the effects will mute and the Display will read “bYP” and then dim. Bypass turns off any effects going to the output, and is useful for turning off delay for a certain part of a song, for example.

Control Footswitch. When a footswitch is connected to the ring of the 3 connector Footswitch jack, it functions as a Control footswitch. This footswitch has 2 different functions, depending on the type of effect it is used on.

On a Leslie Effect: The control footswitch controls the Leslie speed. When it is pressed, the display will either read ffSt or SLO and the rotating speaker will ramp up to the Fast or down to the Slow speed, respectively.

On a Delay Program: The Control footswitch acts as a “Tap Tempo” control. Tapping on the footswitch in tempo with the music will create a 1/4 note delay in tempo with the song. The display will briefly display the Delay Time (in milliseconds).

When the selected Program is not a Leslie or Delay Program, pressing the Control footswitch will have no effect.

Tap From Audio. If the Control footswitch is held down and audio is played into the inputs, these impulses will be used to set the delay time. For example, hold down the Control footswitch on a delay program and play two staccato notes on a guitar, keyboard, etc. The delay time will be set for the time between these two sounds. Make sure that the level of these impulses are at least -6dB on the front panel meters (the third segment up) so that the MicroVerb 4 has sufficient level to trigger from.

Tip: High notes work better than low notes when using this feature.

CHAPTER 3

OVERVIEW OF EFFECTS

Reverb Effects

Reverb is made up of a large number of distinct echoes, called reflections. In a natural acoustic space, each reflection's amplitude and brightness decays over time. This decaying action is influenced by the room size, the location of the sound source in the room, the hardness of the walls, and many other factors. The MicroVerb 4 offers the following types of reverberation:

Concert Hall (Programs 00-09, 100-109)

This is a simulation of a large concert hall. Halls tend to be large rooms with lots of reflective surfaces, where sounds can swim around, changing timbre over time. This is a classic reverb which sounds good on just about anything. Try it on vocals, drums, acoustic, electric, or orchestral instruments.

Real Room (Programs 10-19, 110-119)

This algorithm gives you the sound of a medium size studio room. This algorithm uses a lot of processing power for a rich sound and smooth decay. It has a punchier, bigger sound than a Hall reverb, which makes it good for Rock and Dance music. The attack is also more reflective. It sounds good on drums, keyboards and guitars. This type also includes Nonlinear, Gated, and Reverse reverbs. for percussion and effects.

Plate Reverb (Programs 20-29, 120-129)

This is a simulation of a classic echo plate, a 4' by 8' suspended sheet of metal with transducers at either end used to produce reverb. Popular in the 1970's, it still prized for its transparent sound, particularly on vocals and guitars. It works well for a lush lead vocal, piano, or guitar, especially when looking for a classic rock and roll sound.

Reverb Parameters

Decay (Edit A)

The Reverb Decay determines how long the Reverb will sound before it dies away. Turning up the Reverb Decay will have the effect of increasing the rooms size. Generally, Classical, Jazz, and Ballad styles will use longer decay times than Up tempo Rock or Dance music. The LCD display will show the Decay time in Seconds and Milliseconds.

Hi Cut (Edit B)

The Hi Cut filter can be set between 059 Hz and 36.2 kHz or OFF, and attenuates all frequencies above this value by 6dB per octave. The lower the setting, the less high frequencies of the input are allowed to pass thru to the reverb effect. This controls the overall character of the room. Try a brighter sound on vocals, drums, and percussion, and a darker sound (i.e. lower Hi Cut frequency) on Acoustic Guitar, Piano, and Strings.

Chorus/Flange Effects (Programs 30-49, 130-149)

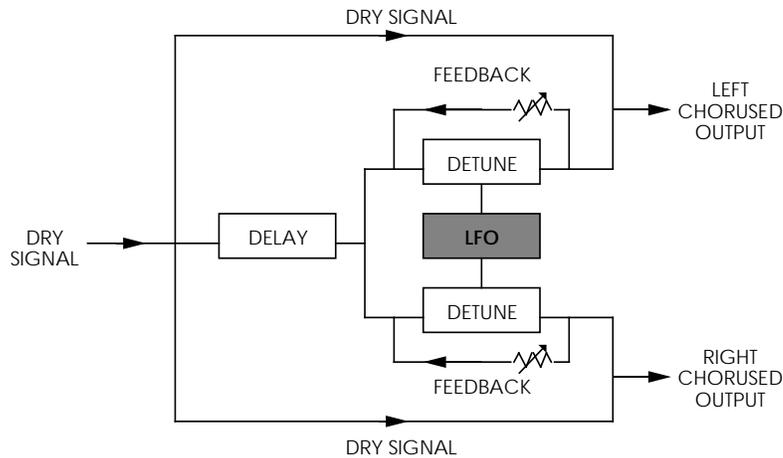
The Chorus and Flange effects alter the pitch and delay of a signal in various ways to produce "layered" timbres that are more complex than the original signal. Although

some of these effects can sound similar to one another depending on the parameter settings, each is achieved differently and can be quite dramatic under the right circumstances. Pitch effects are achieved by splitting the signal into at least two parts, effecting the pitch of one of the parts, then mixing them back together. This eventual mixing is essential since the overall sound of the effect is achieved by the difference between the dry, unaffected signal and the effects signal. Therefore, when using Chorus or Flange, it's best to keep the Mix control around 50%. Also included in this bank is Auto Pan, which pans a mono signal from Left to Right. This type of effect works best with the Mix control set 100% wet. The various types of Chorus and Flange are:

Stereo Chorus

The Chorus effect is achieved by splitting the signal into three parts with a dry signal and a separate Detuning section for both left and right channels. The detuning is further effected by being modulated by an LFO (low frequency oscillator) which causes the detuning to vary. Many variables are available in this scheme: the Pre-delay can be varied, the LFO depth can be varied, the LFO speed can be varied, and a portion of the detuned signal can be fed back to the input to increase the effect. Finally, the waveform shape of the LFO can be changed from a smooth sine wave, to a more abrupt squarewave to make the pitch detuning more pronounced.

Some of the MicroVerb 4's Choruses have individual LFOs controlling the Left and Right sides, set at different rates. These effects, called True Stereo Choruses, often have a wider stereo image than regular Stereo Chorus effects. When the Rate is changed on a True Stereo Chorus, the frequency difference between the Left and Right sides is maintained. *Note:* These Choruses process the Left and Right sides individually, so any stereo imaging will be maintained.



Quad Chorus

Quad Chorus modulates four delayed signals, each with its phase offset by 90°. It gives you twice as much modulation effect as the Stereo Chorus, so it's great for really fattening up a sound.

Chorus

This is a less processor intensive version of the Stereo Chorus, used in Multi Effect configurations. The effect of Chorusing is achieved by splitting and slightly delaying one part of the signal, then varying the time delay with an LFO. The delayed signal is then mixed back with the original sound to produce a thicker, warmer sound.

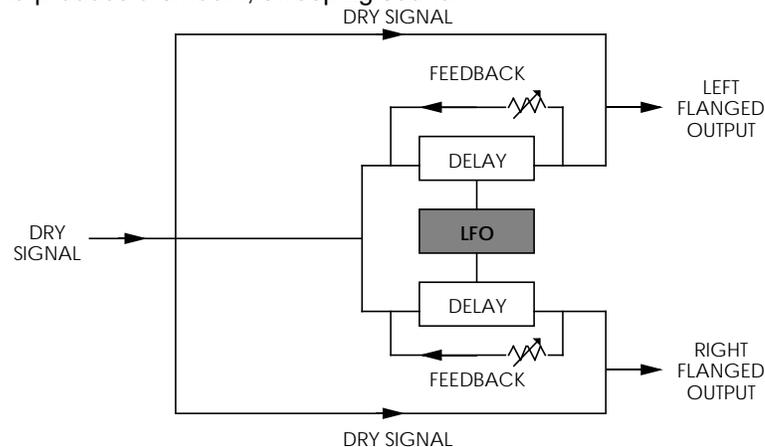
Stereo Flange

First used in the 1960s, “flanging” was achieved by the use of two tape recorders that would record and play back the same program in synchronization. By slowing down one tape machine, and then letting it catch up with the other, different phase cancellations would occur at different frequencies. Since the slowing down of the tape machines was done by hand pressure against the flanges of the tape supply reels, the term “flanging” came into being.

Flanging is similar to chorusing, but modulates the delayed signal over a much shorter delay range (typically 0-12 ms). This produces a “jet airplane”-like sound. The flange modulation sweep can be triggered by the audio input (either the left or right input, or both), in order to sync up with the rhythm of your playing.

In the case of the Stereo Flange, the signal is split into four parts with a stereo dry signal and a separate Delay section for both left and right channels with one channel flanging up while the other channel flanges down. Once again, this causes the effect to become more pronounced and dramatic. True Stereo Flanges have individual LFOs controlling the Left and Right sides for a wider stereo image.

Some of the Flange Programs reset their LFO every time the input level passes a set threshold. These are called Triggered Flanges, and are useful for sweeping effects that move in time with the music or part. If the flange is retriggered in the middle of its sweep, this may cause a thumping or popping effect. This is not a malfunction of the MicroVerb 4. If you set the input volume properly (retriggering will occur when the input signal crosses -6dBv on the input meters), the flanger will only retrigger for attacks and produce a smooth, sweeping sound.



Auto Pan

The Auto Pan effect alternates the loudness of the signal in opposite channels at a definable rate. This effect may be triggered by the input signal (either the left or right input, or both). It can also be used for Tremolo effects, creating a fast panning effect for surf guitar. Edit A controls the speed of the panning effect and Edit B controls the width of the pan. When using the Auto Pan effect, the MicroVerb 4 should have its effects mix 100% wet with no direct signal mixed in to avoid phase problems.

Chorus/Flange Parameters

Rate (Edit A)

The Rate control sets the speed of the Chorus or Flanging sweep. When the Edit A knob is turned, the LCD display will show the edited sweep frequency in Hertz.

Depth (Edit B)

The Depth control sets the intensity of the Chorus or Flanger sweep. The LCD display will show the depth in a scale from 0 to 127 (0-125 for Flangers). *Tip:* Faster Choruses or Flangers typically sound better with a shallower depth than slower ones.

Delay Effects (Programs 50-59, 150-159)

Delay is a discrete echo repeat, unlike the rapid wash of repeats that create reverb effects. It is useful for adding depth to a track or performance if a reverb is muddying up the mix. There are several types of Delay in the delay bank:

Mono Delay

This subtype provides a delay of up to 1270 ms. The delay time can be adjusted separately by 10 millisecond increments. Feedback is also available to increase the number of delay repeats.

Stereo Delay

This Single Configuration provides two separate delays. Typically, the Edit A knob controls one side, and the other changes in proportion. The delay time can be adjusted separately by 5 ms increments.

Ping Pong Delay

So called because the output bounces from left to right in stereo with the speed determined by the delay time. The delay can be adjusted in 5 ms increments, and feedback is adjustable from 0-99%.

MultiTap Delay

This is like having three delays at once. They are usually arranged in a rhythmic delay pattern. The Edit A knob scales all of the delay times so that you can make the delay rhythm fit the tempo of a song.

Delay Parameters

Time (Edit A)

This control sets the time between the input signal and the first delay tap. On the Multi Tap Delay and Stereo Delay programs, the Edit A knob will scale all of the delays by a percentage. The LCD display will show you the delay time in Seconds and Milliseconds, or (in the case of Multi Tap and Stereo Delays) percentage of the time scaling.

Feedback (Edit B)

After a signal has gone through the delay processing, it is fed back to the delay input. The Feedback control sets what percentage of the signal will go back through the delay. At a setting of 0%, no signal will go back through the delay, so only one delay

tap will be heard. At a setting of 10%, only a little signal will be fed back through the delay, so the signal will repeat back a few times before fading into silence. At a Feedback setting of 100%, the signal will continue repeating for a few minutes before decaying into silence.

Setting Delay Time Using Tap Tempo

You can adjust the delay time using a technique called “tap tempo”. If you connect a footswitch to the ring of the Footswitch jack, it can be used as for Tap Tempo. (See Chapter 2, “Footswitch”, for connection instructions.) By tapping on the “Control” footswitch in tempo with the song, you can get a delay which repeats in time with the music.

The MicroVerb 4 can also set its Delay Time by playing audio into the Inputs. To set the delay time using this method, hold down the Control Footswitch and play some quick notes into the MicroVerb 4. See Chapter 2, “Footswitch”, for details.

Pitch Shifter Effects (Programs 60-69, 160-169)

The Pitch shifter in the MicroVerb 4 takes the Pitch of the input signal and shifts it higher or lower by a fixed amount. Pitch shifters are useful for creating instant parallel harmonies and for creating subtle chorusing effects. The Pitch Shifters in the MicroVerb 4 include:

Stereo Pitch Shifter

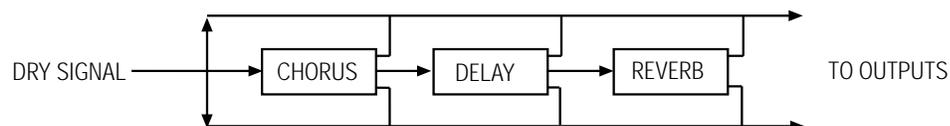
The Pitch Shifter effect transposes the pitch of the incoming signal by a fixed amount. It is useful for creating parallel harmonies, detuning, chorusing, and special effects. The Semi (Edit A) parameter shifts the pitch in increments of one half step, with a range of up or down one octave. The Fine (Edit B) parameter detunes the signal in very fine increments, with a range of up or down one half step.

Stereo Pitch Detuner

The Pitch Detuner has a range of plus or minus one half step in increments on 1 cent. It is useful for a slight chorus effect or for Half step shifts. The Shift L (Edit A) and Shift R (Edit B) parameters control the shift of the Left or Right output.

Multi Effects (Programs 70-89, 170-189)

There are several Multieffect Programs in the MicroVerb 4. A multieffect can be simply described as 2 or three effects at once. This typically involves a pitch effect with reverb, such as Stereo Chorus into a Hall, or something more esoteric such as Leslie into a room.



Leslie

With the Leslie effect, the pitch change block becomes a rotating speaker simulator. This effect was extremely popular during the 1960's and was achieved by mechanically rotating the speakers to produce complex timbral changes. The Leslie speaker system is most often used with tone-wheel organs, but is occasionally used for guitar amplification as well. When changing the speed between fast and slow, the

effect will ramp rather than change abruptly, just as a true Lezlie speaker system would do.

Multi Effects Parameters:

Decay (Edit A)

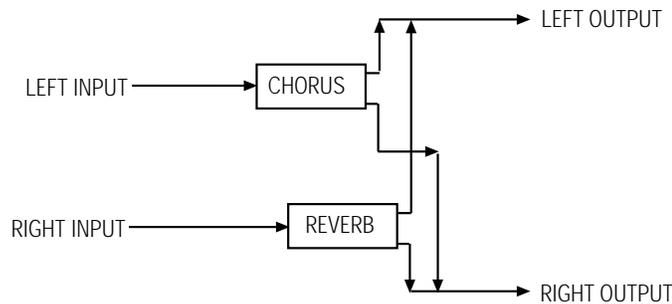
The Decay parameter controls the length of the Reverb. When adjusted, the LCD display will show the decay time in Seconds and Milliseconds.

Rate/Time (Edit B)

The Rate/Time parameter controls the rate of a Chorus or Flange, the Delay Time of a Delay, or the Motor Speed of a Lezlie, depending which is active in the Program. In the case where three effects are active at once, Chorus/Delay/Reverb for example, Edit B controls the Delay Time.

Dual Send Effects (Programs 90-99, 190-199)

The Dual Send programs all have two different effects. These effects are each fed by one of the inputs so that they can be used independently.



This is an ideal setup for someone using the MicroVerb 4 with a mixer. By hooking two of the Aux Sends into the Left and Right inputs of the MicroVerb 4, you can use it to provide two discrete effects. Some of the multi effects include:

Reverb/Delay

The Left Input of the MicroVerb 4 feeds a Room reverb and the Right Input feeds a Mono Delay. The Edit A knob controls Reverb Decay (displayed in seconds) and the Edit B knob controls Delay time (also in seconds).

Reverb/Chorus

The Left input again feeds a Room reverb, and the Right side feeds a Stereo Chorus. The Edit A knob controls Decay time (in seconds) and the Edit B knob controls Chorus Rate (in Hertz). This Dual send Chorus has two individual LFOs panned hard left and hard right for a wide sound, and when the rate is changed the difference between the two rates will stay constant.

Reverb/Flange

The Left input again feeds a Room reverb and the Right input feeds a Stereo Flanger. Edit A controls the Reverb Time (in seconds) and Edit B controls the Flanger Rate (in Hertz).

CHAPTER 4

DESCRIPTION OF CONTROLS

Front Panel

Input Level

The Input Level controls the level of the signal being fed into the MicroVerb 4. The MicroVerb 4 can operate with signal levels anywhere from +4dBv Pro Audio gear to guitar level signals. To set the input level, watch the Input Meters while adjusting the Input level (see below).

Mix Level

The Mix Level controls the balance between the unaffected signal coming through the inputs and the effects being generated by the MicroVerb 4. When the Mix is turned all the way to the left, the input signal will be sent straight to the output with no effects added. When the Mix is turned all the way to right, only the effects will be sent to the outputs with none of the original input signal mixed in. By keeping the Mix somewhere in the center, a blend of dry and wet signal can be achieved.

With a typical instrument setup (use with a guitar amp, etc.) the Mix is usually set around 12 o'clock. When used with a mixing console, the Mix control should be turned all the way to the right (full wet) so that the effects mix can be controlled from the mixer.

Output Level

The Output Level controls the volume of the signal from the output of the MicroVerb 4. The optimum level for this control is 75%, but it can be raised or lowered as necessary.

Level Meters

These peak-style meters monitor the signal strength of the unprocessed inputs, and are used in much the same way as the level meters on a standard tape recorder. Since the MicroVerb 4 is a True Stereo device, both the Left and Right inputs are shown separately as they may be performing different functions. When the red "Clip" LEDs are lit, the input signal may be distorted so the Input level should be backed off. If the bottom "-32dB" LEDs are barely coming on, the input signal is not high enough and the resulting sound from the MicroVerb 4 may be noisy. Ideally, the Input signal level should be set so that the input lights the first two or three LEDs.

The "Clip" indicators may light up even if the signal level has not passed the -6dB level. If this happens, it means that the signal is clipping internally, probably on a regenerating program like a reverb or a flange with lots of feedback. If this happens simply back off the Input level until the problem goes away.

LED Display

When the MicroVerb 4 is first turned on, it will always cycle through a simple test mode. First, all LED segments in the display will light up. Then, it will display the software version installed (i.e. 1.00). Finally, it will return to the Program Number

which was last selected. (Note: When the MicroVerb 4's power is disconnected, any edits to the currently selected Program will be lost.)

The MicroVerb 4's display is used to indicate the following:

- ⌘ Program Number. MicroVerb 4 Programs are numbered from 00 to 199. Programs 0-99 are Preset programs and 100-199 are User Programs. Unless some parameter on the MicroVerb 4 is being edited, the Program Number will always be displayed in its normal illumination. The only exception to this is when the MicroVerb 4 is bypassed with a footswitch; when the unit is bypassed the Program Number will be shown with the display dimmed.
- j MIDI Channel. When the [BANK/MIDI] button is held down, the Display will dim and the current MIDI Channel will be reported. The MIDI Channel can then be edited by turning the Value wheel while the Bank/MIDI button is held. Possible MIDI Channels are 00 (Omni), and 01-16.
- ↵ Overwrite Program Number. When the [STORE] button is pressed, the Program about to be saved over will flash. Only User Programs can be Stored over, so if [STORE] is pressed while editing a Preset Program the MicroVerb 4 will add 100 to the Program number for storage. When the Store button is pressed again to confirm, the Program number will flash rapidly and then return to the normal Program Number display.
- ÷ Parameter Value. When the [EDIT A] or [EDIT B] knobs are turned, the LED display will dim and show the new value for that parameter. For example, when Edit A is adjusted on a Hall programs, the display will briefly show the new Reverb Time in seconds and milliseconds, then return to the Program number.

STORE Button

Either Preset or User Programs can be temporarily edited using the Edit A and Edit B knobs. If you wish to store these edits for later recall, press the [STORE] button. If you have edited a User Program, that Program number will start flashing. If you have edited a Preset Program, the complementary User Program number (that Program plus 100) will start flashing, since Presets cannot be saved over. This is the Program number which is about to be overwritten. By pressing the [STORE] button again, you tell the MicroVerb 4 to actually store the Program. The Program number will flash rapidly and then return to the normal Program Number display.

BANK/MIDI Button

This button serves three functions. To switch between the Preset Bank and the User bank, press and release the Bank button. The Program number will either increase or decrease by 100 as the unit switches banks. If the Bank/MIDI button is pressed and held for a moment, the current MIDI channel will be displayed. If the Value knob is turned while the Bank/MIDI button is being pressed, the MIDI channel can be adjusted. Finally, to dump the memory of the MicroVerb 4 to a sequencer or program librarian program, DataDisk, etc., hold the Bank/MIDI button until the MIDI channel is displayed and press [STORE]. The contents of the User bank will be sent to the MIDI output.

VALUE Knob

When no other button is being pressed, the Value Knob is used to change Programs. If the Bank/MIDI button is held while the Value Knob is being turned, the MicroVerb 4 will change its MIDI channel.

Edit A/ Edit B Knobs

The Edit A and Edit B knobs are used to adjust aspects of the currently selected Program. For example, on a Concert Hall program, the Edit A knob adjusts Reverb Decay Time and the Edit B knob adjusts Reverb Input Hi Cut. When the Edit A or Edit B knobs are adjusted, the new parameter registers briefly on the display.

Rear Panel

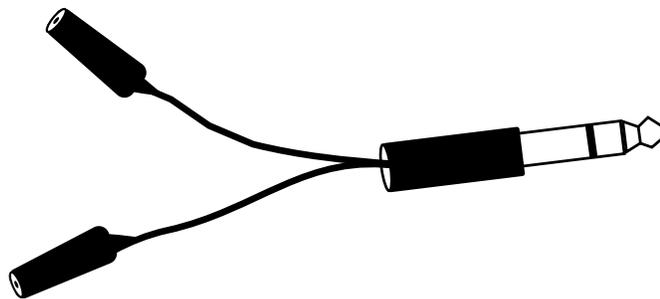
Power

This is a plug for connecting the Alesis Model P3 +9VAC power supply (supplied). The power supply is then connected to an AC outlet delivering a nominal 120VAC. The correct power supply must be used AT ALL TIMES. Any other power supply might create a fire risk and/or permanently damage your unit. This damage would NOT be covered under your warranty.

Footswitch

This is a 1/4" stereo phone jack which connects to one or two momentary (not latching) footswitches, either normally-open or normally-closed.

- When one footswitch is plugged into the Footswitch jack, it will function as a Bypass footswitch. When the Footswitch is pressed, the display will read "bYP", the display will dim, and the MicroVerb 4 will stop producing effects. If the footswitch is pressed again, effects output will continue.
- Two footswitches can be connected if a simple adapter cable is used, similar to an Insert cable:



When this setup is used, the footswitch connected to the Tip functions as a Bypass footswitch. The footswitch connected to the Ring functions as a Control footswitch. For more information, see Chapter 2, "Footswitch".

MIDI In

This is a 5-pin DIN standard MIDI plug which connects to any MIDI compatible equipment such as a MIDI sequencer that will send program changes and controller information to the unit.

MIDI Out/Thru

This is a 5-pin DIN standard MIDI plug which connects to any MIDI compatible equipment such as a keyboard or another effects device. It is provided for sending system exclusive commands for storing programs. It also relays all messages received on the [MIDI IN].

Input (Left/Mono & Right)

These are 1/4" phone jacks which connect to sources such as the effects sends of mixing consoles. They may be used with nominal input levels from -10dBV (guitar level) to +4dBu. For mono applications, use the [LEFT/MONO] input.

The [LEFT/MONO] input jack is normalled to the [RIGHT] jack. This means that when nothing is plugged into the [RIGHT] input jack, the signal present at the [LEFT/MONO] input is routed to the [RIGHT] as well.

Output (Left & Right)

These are 1/4" phone jacks which connect to devices such as the effects returns on a mixing console or Power Amplifier Inputs. For mono applications, use the [LEFT] output.

CHAPTER 5

MIDI APPLICATIONS

MIDI Functions

The MicroVerb 4 provides many MIDI functions, including being able to respond to program changes, sending and receiving Program information via SysEx (System Exclusive) dumps, and realtime control over effect parameters via MIDI controllers. For more information about basic MIDI connections, see Chapter 2.

MIDI Channel

The MIDI Channel is used to receive program change messages, as well as other MIDI events for use with the realtime modulation capabilities in the MicroVerb 4.

To set the MicroVerb 4's MIDI channel:

- ⌘ Press and hold [BANK/MIDI].
The Display will dim and display the current MIDI channel.
- ⌋ Turn the [VALUE] knob to set the MIDI Channel to either 01 through 16, or 00 for Omni mode (receives on all 16 channels simultaneously).

MIDI Thru

The MicroVerb 4 automatically sends information from the MIDI IN to the MIDI OUT/THRU. In order to pass on MIDI information from a control device thru the MicroVerb 4 to another MIDI device, connect the control device's MIDI OUT to the MicroVerb 4's [MIDI IN]. Then connect the MicroVerb 4's [MIDI OUT/THRU] to the MIDI IN of the other device you wish to control.

If too much information is being sent thru the MicroVerb 4, the internal buffer may overflow. If this happens, the front panel will read FLO and some data going to the receiving unit may be lost. Alesis recommends that any dense MIDI information (SysEx, Midi Time Code, etc.) be routed directly to the receiving unit using a MIDI Patchbay instead of relying on the Thru port of the MicroVerb 4.

Receiving Program Changes

In order to recall programs on the MicroVerb 4 from a MIDI controller device :

- ⌘ Connect the control device's MIDI OUT to the MicroVerb 4's [MIDI IN].
- ⌋ Make sure that the MicroVerb 4 is set to the same MIDI Channel as the device that you are sending from (see above).

Note: It is possible to select either the Preset or User bank via MIDI by sending a Controller 0 message immediately followed by a program change message. A Controller 0 with a value of 0 will select the Preset bank, while a value of 1 or higher (up to 127) will select the User bank. Any Program Change messages over 100 will be ignored.

SYSEX Storage

In order to send and receive Program information via Sysex (System Exclusive) dumps using a computer, or some other SysEx storage device, or another

MicroVerb 4:

- ⌘ Connect the MicroVerb 4's [MIDI OUT] to the receiving device's MIDI IN.
- ⌘ Press and hold [BANK/MIDI] and press the [STORE] button.
The display will read Snd as the User Programs are sent.
- When you send a Sysex dump back to the MicroVerb 4, it will automatically go into receive mode (you do not have to do anything to the unit). When this occurs, the display will read rEc.

Note: If an error occurs while receiving Sysex data back into the MicroVerb 4, the display will briefly indicate Err

If this occurs, try sending the data again. If the problem persists, it may indicate a bad MIDI cable connection or a problem with the data itself.

Realtime Modulation Functions

You can use MIDI controller messages to simultaneously control up to two parameters in the MicroVerb 4, such as delay time, room decay, etc. Modulation functions are “hard-wired” in each Program, and therefore cannot be changed. MIDI Controllers 1 (Modulation) and 11 (Foot Controller) are always active on the MicroVerb 4, and will typically modulate the Edit A and Edit B parameter values.

The parameters in each Program which can be modulated via MIDI have been chosen very carefully to provide the most-desired modulation combinations. For example, on a Multieffect with Chorus and Reverb, Controller 1 controls Reverb Decay and Controller 11 controls Chorus Rate. These modulators add positive modulation to the saved program value. The minimum Modulation amount will give you the saved value, while the maximum Modulation value will increase that parameter to its maximum possible setting. On a few programs, only one parameter is available for modulation.

Remember that Modulation is always positive when setting up your programs. For example, if you wish to modulate Leslie speed during a performance, make sure you choose a Program with the “Slow” speed saved into memory. This way, when the modulation is increased, the motor will speed up. If the Leslie Program has a “Fast” speed saved, increasing the modulation amount will have no effect since that parameter is already at its maximum value.

* *Note:* If audio is going through a chorus effect and the depth parameter is changed, you will notice audible “clicks”. This is due to the fact that the processor is making significant changes in the effect's algorithm. We recommend that you change the setting of this parameter only while no audio is running through the effect.

CHAPTER 6

TROUBLESHOOTING

Troubleshooting Index

If you are experience problems while operating the MicroVerb 4, please use the following table to locate possible causes and solutions before contacting Alesis customer service for assistance.

Symptom	Cause	Solution
The display does not light when the unit is powered on.	No power.	Check that the power cable is plugged in properly.
Sound is distorted, Red “Clip” LEDs are lit	Input level is too high.	Turn down the Input Level control.
Does not respond to MIDI program changes or modulation control.	MIDI channel is set to a different number than the controlling device.	Hold [BANK/MIDI] and turn the [VALUE] knob to adjust the MIDI channel.
No audio is heard.	Bypass function is on with Mix turned 100% wet.	Turn the Mix control to the left or press the Bypass Footswitch.
	Output level is too low.	Turn the Output control to the right.
Hum or noise from output.	Ground loop.	Try plugging the unit into another power jack or different audio cables.
Unit does not respond to front panel controls.	Unknown software conflict, cosmic rays, aliens, or static electricity.	Disconnect MIDI input. Power down and power up again. If this doesn't work, try reinitialization.

Re-initializing

To re-initialize the MicroVerb 4, hold down both [STORE] and [BANK/MIDI] while turning on the power. This will reset all User Programs and the MIDI channel to their default values, and will recall Preset 00.



Important: The Programs in the User bank are erased when re-initializing the unit this way. Be sure you have stored these Programs into some sort of data storage device via MIDI System Exclusive before performing a re-initialization (see Chapter 6).

Checking the Software Version

The current software version is displayed when the MicroVerb 4 is powered on. To check the software version, plug in the Microverb 4 and note the number displayed.

Maintenance/Service

Cleaning

Disconnect the AC cord, then use a damp cloth to clean the MicroVerb 4's metal and plastic surfaces. For heavy dirt, use a non-abrasive household cleaner such as Formula 409 or Fantastik. **DO NOT SPRAY THE CLEANER DIRECTLY ONTO THE FRONT OF THE UNIT AS IT MAY DESTROY THE LUBRICANTS USED IN THE SWITCHES AND CONTROLS!** Spray onto a cloth, then use cloth to clean the unit.

Refer All Servicing to Alesis

We believe that the MicroVerb 4 is one of the most reliable multieffects processors that can be made using current technology, and should provide years of trouble-free use. However, should problems occur, **DO NOT** attempt to service the unit yourself. High voltage/high current DC voltages are present at several points within the chassis. Service on this product should be performed only by qualified technicians. **NO USER-SERVICEABLE PARTS INSIDE.**

Obtaining Repair Service

Before contacting Alesis, check over all your connections, and make sure you've read the manual.

Customers in the USA and Canada: If the problem persists, call Alesis USA at 1-310-841-2272 and request the Product Support department. Talk the problem over with one of our technicians; if necessary, you will be given a return order (RO) number and instructions on how to return the unit. All units must be shipped prepaid and COD shipments will not be accepted.

For prompt service, indicate the RA number on the shipping label. If you do not have the original packing, ship the MicroVerb 4 in a sturdy carton, with shock-absorbing materials such as styrofoam pellets (the kind without CFCs) or "bubble-pack" surrounding the unit. Shipping damage caused by inadequate packing is not covered by the Alesis warranty.

Tape a note to the top of the unit describing the problem, include your name and a phone number where Alesis can contact you if necessary, as well as instructions on where you want the product returned. Alesis will pay for standard one-way shipping back to you on any repair covered under the terms of this warranty. Next day service is available for a surcharge.

Field repairs are not normally authorized during the warranty period, and repair attempts by unqualified personnel may invalidate the warranty.

Service address for customers in the USA:

Alesis Product Support
3630 Holdrege Avenue
Los Angeles, CA 90016

Customers outside the USA and Canada:

Contact your local Alesis distributor for any warranty assistance. The Alesis Limited Warranty applies only to products sold to users in the USA and Canada. Customers outside of the USA and Canada are not covered by this Limited Warranty and may or may not be covered by an independent distributor warranty in the country of sale. Do not return products to the factory unless you have been given specific instructions to do so.

MIDI IMPLEMENTATION CHART

Function		Transmitted	Recognized	Remarks
Basic Channel	Default Changed	X * * * * * * * *	1 — 16	
Mode	Default Messages Altered	X X * * * * * * * *	Mode 3 X	
Note Number	True Voice	X * * * * * * * *	X X	
Velocity	Note On Note Off	X X	X X	
After Touch	Key's Ch's	X X	X X	
Pitch Bender		X	X	
Control Change	0, 1, 11	X	O	
	2–10, 12 – 119	X	X	
Prog Change	True #	X * * * * * * * *	O 0 — 99 0 — 99	
System Exclusive		O	O	
System Common	Song Pos	X	X	
	Song Sel	X	X	
	Tune	X	X	
System Realtime	Clock	X	X	
	Commands	X	X	
Aux Messages	Local On/Off	X	X	
	All Notes Off	X	X	
	Active Sense	X	X	
	Reset	X	X	
Notes b x x				

Mode 1: OMNI ON, POLY
Mode 2: OMNI ON, MONO

Mode 3: OMNI OFF, POLY
Mode 4: OMNI OFF, MONO

O : Yes
X : No

SPECIFICATIONS

Electrical

Frequency Response:	±1dB from 20Hz to 20 kHz
Dynamic Range:	>90dB "A" wtg., 20 Hz-22kHz
Distortion:	<0.009% @ 1kHz, nominal level (-12 dBfs) <0.005% @ peak level
Crosstalk:	<90dB below full scale

Input

Number of Channels:	2
Format:	1/4" unbalanced
Nominal Level:	-10 dBV, adjustable to +4 dBV
Maximum Level:	+10 dBV
Impedence:	1MW/channel stereo, 500kW/channel mono

A/D - D/A Conversions

Processor Speed:	3 MIPs (million instructions per second)
Processor Memory:	64K x 16 bits
A/D converter:	18 bit Sigma-Delta, 128 times oversampling
D/A converter:	18 bit Sigma-Delta, 8 times oversampling

Output

Number of Channels:	2
Format:	1/4" unbalanced
Maximum Level:	+17.5dBu
Nominal Level	-20 dBV or +4dBu, front- panel adjustable
Output Impedance:	500 ohms

Front Panel

Controls	INPUT OUTPUT EDIT A	MIX VALUE EDIT B
Buttons	STORE	BANK/MIDI
Indicators	LED Display LED Peak Meters	

Rear Panel

Input (LEFT/MONO, RIGHT)	1/4" 2-conductor
Output (LEFT, RIGHT)	1/4" 2-conductor
FOOTSWITCH	1/4" Stereo (accepts normally open or normally closed momentary footswitches, such as the Alesis PD, and Stereo Footswitches)
MIDI (IN, OUT)	5 pin DIN
Power	9 Volt Power Transformer (Alesis P3)

Processing and Memory

User Programs (RAM):	100
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Factory Preset Programs (ROM):	100
Internal processing resolution:	24 bit accumulator
Delay memory:	1270 milliseconds
Reverb effects:	Concert Hall, Real Room, Ambience, Plate Reverb, Nonlinear
Delay effects:	Mono Delay, Stereo Delay, Ping Pong Delay, Multi Tap Delay
Pitch effects:	Stereo Chorus, Quad Chorus, Stereo Flange, Stereo Pitch Shifter
Special effects:	Auto Pan
Multiple effect configurations:	
Dual Send:	Real Room+Delay, Real Room+Chorus, Real Room+Flange
Multi Chain:	Delay->Real Room, Chorus->Real Room, Flange->Real Room, Leslie->Room, Real Room->Flange, Chorus->Delay->Room, Flange->Delay->Room